

American Petroleum Institute
1220 L Street, Northwest
Washington, D.C. 20005



Monthly Statistical Report

Prepared by the Statistics Department

Vol. 10, No. 3

APRIL 16, 1986

MARCH 1986

ESTIMATED U.S. PETROLEUM BALANCE SUMMARY

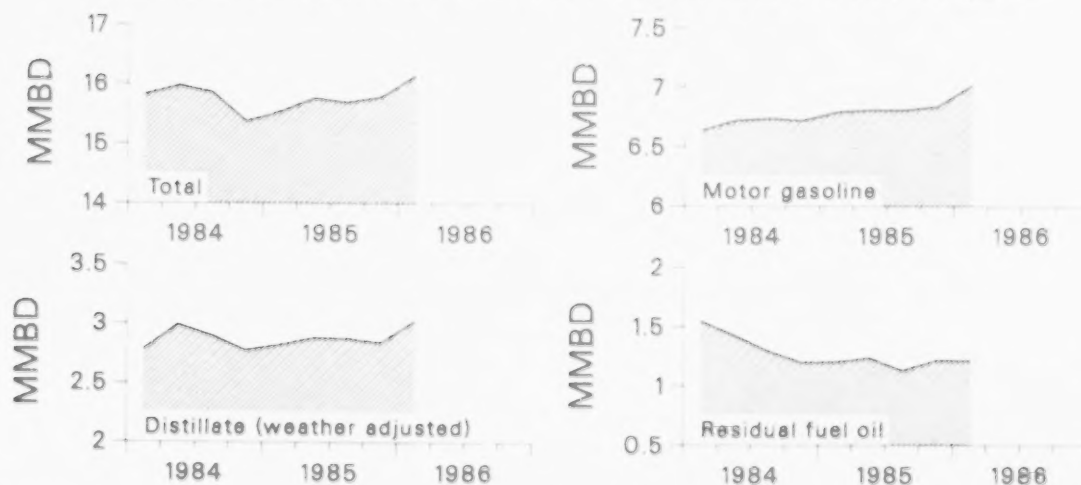
Though March deliveries may have been influenced by nonprimary inventory changes in response to recent events in petroleum markets, petroleum demand appears to be experiencing renewed growth. Total domestic deliveries rose 3.6 percent in the first quarter over year-ago levels, more than 2 percentage points higher than in the last half of 1985. This year's 563 thousand B/D first quarter growth may even be somewhat understated because of changes in the Department of Energy's respondent universe in January. Adjusting January's data for these changes would add roughly half a percent to total deliveries for the first quarter.

Gasoline and distillate deliveries both experienced strong gains in the first quarter after seasonal and (in the case of distillates) weather adjustment, though these increases are likely larger than increases in consumption.

Domestic crude oil production is estimated to have declined 200 thousand B/D in March from last year and by a little over 100 thousand B/D from recent levels as a result of the recent crude oil price decline. However, the estimate is based on preliminary information, and a better measure of the effects of lower crude oil prices on production awaits more complete data from state agencies within the next several months. Imports rose 18 percent for the quarter, partly reflecting below-trend imports in early 1985. Refinery utilization, though higher than during last year's first quarter, declined in March from high levels earlier this year. Product prices that have fallen more rapidly than refiners' average crude oil costs may have led to this decline.

EXHIBIT I

SEASONALLY ADJUSTED PRODUCT SUPPLIED



Sources: Department of Energy, American Petroleum Institute

PRODUCTS SUPPLIED^{1/}

Gasoline

LOWER PRICES MAY BE HAVING AN EFFECT.

Despite the possible distortions in deliveries resulting from movements in secondary and tertiary storage, it appears that the 20 percent decline in retail prices since the end of last year is beginning to have a positive influence on gasoline use. March deliveries of motor gasoline rose 6.0 percent (397 thousand B/D) over last March, and for the quarter as a whole the rate of increase was 3.2 percent (205 thousand B/D), more than one percentage point higher than the roughly 2 percent year-to-year increase experienced in the latter part of 1985. The March increase appears somewhat larger than can be explained by short-run price effects alone, since the long-run effects of the price increases of the 1970s are still being felt as older vehicles continue to be replaced by more efficient vehicles. We estimate the true consumption increase to be on the order of 3 to 4 percent for March. Unleaded's market share rose 5 percentage points from last March to 68 percent of deliveries.

Distillates

10 PERCENT MARCH INCREASE DESPITE WARMER WEATHER.

Despite slightly warmer weather and mixed results for truck and rail traffic in recent months, distillate supplied rose about 10 percent (300 thousand B/D) in March. The month was about 2 percent warmer than last year, indicating a small reduction in demand. Truck traffic in March is estimated to have grown at a rate similar to February's 3 percent, while March rail traffic showed a 5 percent decline. Since these factors taken alone indicate little change in consumption, year-to-year, the explanation for the March increase must lie elsewhere. Fuel switching to distillate is occurring in some sectors, though with the total of industrial, commercial, and utility distillate use amounting to only roughly 600 thousand B/D, the volumes involved are not enough to explain the 300 thousand B/D increase in deliveries. Therefore, it appears likely that some buyers may have taken advantage of lower prices to replenish inventories and much of the March increase could be the result of movements into non-primary storage.

With little net change in the first two months of the year, the increase in distillate deliveries for the quarter as a whole averaged 2.9 percent. However, adjusting for the effects of warmer weather this year, the quarterly increase was about 7 percent due to strong gains in February and March.

Residual Fuel Oil

INDUSTRIAL AND UTILITY PURCHASES RISE.

Because of increases in industrial and electric utility purchases this year, residual fuel oil deliveries rose for the second quarter in a row. The increase for the quarter was 1.2 percent (17 thousand B/D), though deliveries declined a little less than 1 percent in March. Adjusting for the Department of Energy's change in respondents in January would add a little over 1 percent to the first quarter's growth. With bunker fuel estimated to have continued its year-to-year decline of 20 to 30 thousand B/D, electric utilities and industrial users added an estimated 40 thousand B/D to purchases in the first quarter following year-to-year increases in both sectors in last year's fourth quarter. Switching from natural gas, encouraged by lower residual fuel oil prices, appears to be the primary factor.

Kerosine Jet Fuel

STRONG GROWTH CONTINUES.

Miles flown by commercial aircraft have continued to show year-to-year growth of 8 percent for the most recent months available; thus the nearly 5 percent (46 thousand B/D) rise in kerosine jet fuel supplied in March is not surprising. For the quarter as a whole, the increase was 12 percent, partly because of below-trend deliveries in the first quarter of 1985.

Other Oils

UP 8 PERCENT FOR THE QUARTER.

Deliveries of other oils rose 7.9 percent (294 thousand B/D) for the quarter, aided by the strength of March deliveries. First quarter petrochemical feedstock deliveries are believed to have continued the strong growth experienced in January when deliveries rose 20 percent (66 thousand B/D) over the previous January.

Liquefied petroleum gases likely experienced a decline. Ethane deliveries, which fell 11 percent (69 thousand B/D) in January, have likely continued this pattern as falling prices and weak demand discouraged processors from extracting this product from natural gas streams. Weather for the quarter was 13 percent warmer than in 1985, depressing propane demand. This was evident in January, when warmer weather helped to reduce propane deliveries by 11 percent (130 thousand B/D). Other products, taken as a group, likely experienced an increase in the first quarter.

(In millions of B/D)

MARCH ESTIMATES

YEAR-TO-DATE ESTIMATES

	1986	1985	% Change	1986	1985	% Change
—Total domestic products supplied	16.5	15.3	7.4	16.4	15.8	3.6
—Motor gasoline supplied	7.0	6.6	6.0	6.7	6.5	3.2
—Distillate fuel oil supplied	3.4	3.1	9.8	3.4	3.3	2.9
—Residual fuel oil supplied	1.2	1.3	(0.7)	1.4	1.4	1.2

SUPPLY²

A 768 thousand B/D increase in imports for the first quarter joined with a 579 thousand B/D in additional domestic supply to raise total supply by 1,347 thousand B/D.

Production

ESTIMATED MARCH PRODUCTION DOWN 200 THOUSAND B/D.

Domestic crude oil production is estimated to have decreased 2.2 percent (200 thousand B/D) in March from last March, with almost all of the decline occurring in the lower 48. A little over 100 thousand B/D of the decline represents a drop from recent levels because of the recent decline in crude oil prices. However, recent production estimates should be treated with cau-

tion. API estimates are based on recent trends in production and discussions with state agency and company personnel regarding any likely interruptions in operations over the last month. This estimation method is not well suited to capture the initial production impacts of recent crude price declines. A better measure must await the reporting of more complete data from state agencies within the next few months. Production is estimated to have risen 0.5 percent in the first quarter as a whole.

Imports

QUARTER'S 18 PERCENT RISE PARTLY DUE TO LOW YEAR-AGO IMPORTS.

For the quarter as a whole, imports rose more than 18 percent; however, more than half of the first quarter's 768 thousand B/D increase is due to below-trend imports last year because of uncertainties about prices in world markets. Adjusting for this puts the increase for the quarter at about 7 percent.

March imports were down more than seasonal amounts from levels earlier in the year but still exceeded last March's imports by 2.8 percent. March crude imports, at 3,058 thousand B/D, were up 65 thousand B/D from February and slightly below the annual average for 1985. Product imports fell about 9 percent (167 thousand B/D) versus last March, largely because of a 230 thousand B/D drop in gasoline imports from last year's high levels.

Petroleum imports from Mexico in January, at 680 thousand B/D, continued at lower levels than typical during 1985, while imports from Saudi Arabia rose for the fourth consecutive month to 664 thousand B/D, a more-than-six-fold increase from January 1985. The lower Mexican imports may result in part from difficulties in adjusting sales terms in the midst of falling world crude oil prices, while the rise in imports from Saudi Arabia corresponds with the doubling of output in that country since last summer. Canada was the largest supplier to the U.S. in January at 826 thousand B/D.

Inventories

MARCH PRODUCT STOCKS FALL, CRUDE RISES.

Total inventories fell 41 million barrels in March, about 25 million barrels more than the historical average for that month. More than half the decline was in gasoline stocks, which fell 24 million barrels compared to a historical average of about 5 million barrels for March.

However, because of higher-than-average accumulations earlier in the year, gasoline stocks ended the quarter at the same level as last March. Distillate stocks declined by 18 million barrels to 96 million barrels, with both the decline and the level typical of end-of-season patterns of recent years. While product stocks fell, import lags caused crude stocks to rise 6 million barrels as some refiners reduced operations from the high levels of earlier months.

Operations

MARCH DOWN FROM PRIOR MONTHS, AHEAD OF LAST YEAR.

Utilization rates in January and February were the highest for those months of the past 6 years. These high rates helped to push the average for the quarter four percentage points ahead of last year. However, as product prices fell more rapidly than refiners' crude oil costs during the quarter, input to crude oil distillation units, though still ahead of last March by nearly 370 thousand B/D, declined from levels earlier in the year.

March output of distillates was almost one-half million barrels per day greater than last year, responding to the large increase in deliveries. Gasoline output was slightly higher in March, following two months of year-to-year increases of over ten percent. For the quarter as a whole, gains in gasoline production exceeded the increase in deliveries by over 200 thousand B/D.

(In millions of B/D)	MARCH ESTIMATES			YEAR-TO-DATE ESTIMATES		
	1986	1985	% Change	1986	1985	% Change
—Total supply	16.1	15.7	2.4	16.7	15.4	8.7
—Crude production ^{2/}	8.8	9.0	(2.2)	8.9	8.9	0.5
—Crude oil imports ^{3/4/}	3.1	2.8	10.8	3.1	2.4	27.8
—Product imports	1.7	1.9	(8.9)	1.9	1.8	5.0

- 1/ Total supply, i.e., production plus imports adjusted for net stock change is equal to total products supplied from primary storage. Total products supplied from primary storage less exports is equal to total domestic products supplied. Information contained in this report is derived from information published in the API Weekly Bulletin and is based on historical analysis of the industry. All data reflect the most current information available to the API and include all previously published revisions.
- 2/ Includes lease condensate.
- 3/ Beginning with January 1977, the U.S. Department of Energy began reporting crude oil imports as of the date of importation. Previously, this data, with the exception of Canadian crude imports, was reported as of the date it was received at the refinery. This change may affect both the level of crude oil imports and crude oil stocks. API estimates of these data may, therefore, differ slightly from those of the U.S. Department of Energy.
- 4/ API data do not include crude oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR (according to the U.S. Department of Energy, the SPR held approximately 497 million barrels as of March 31, 1986.)

ESTIMATED UNITED STATES PETROLEUM BALANCE

(Daily Average in Thousands of 42 Gallon Barrels)

Products Supplied/Supply From Primary Storage	MARCH			YEAR-TO-DATE		
	1986 ¹	1985 ²	% Change	1986 ^{3R}	1985 ²	% Change
Products Supplied						
Total motor gasoline	7,026	6,629	6.0	6,700	6,495	3.2
Finished leaded motor gasoline*	2,234	2,440	(8.4)	2,116	2,406	(12.1)
Finished unleaded motor gasoline*	4,792	4,189	14.4	4,584	4,089	12.1
Naphtha-jet	227	181	25.4	205	202	1.5
Kerosine-jet	986	940	4.9	1,067	953	12.0
Distillate fuel oil	3,369	3,069	9.8	3,371	3,276	2.9
Residual fuel oil	1,247	1,256	(0.7)	1,378	1,361	1.2
All other oils ⁴	3,949	3,509	12.5	4,023	3,729	7.9
Reclassified ⁵	- 347	- 262	32.4	- 372	- 207	79.7
Total domestic products supplied	16,457	15,322	7.4	16,372	15,809	3.6
Exports	937	694	35.0	891	778	14.5
Total products supplied	17,394	16,016	8.6	17,263	16,587	4.1
Supply						
Domestic production						
Crude oil ⁶	8,821	9,021	(2.2)	8,898	8,855	0.5
Natural gas liquids	1,631	1,615	1.0	1,675	1,629	2.8
Other supply ⁷	856	430	99.1	1,187	697	70.3
Total domestic supply	11,308	11,066	2.2	11,760	11,181	5.2
Imports						
Crude oil, total	3,058 ^{10/}	2,760 ^{10/}	10.8	3,113 ^{10/}	2,435 ^{10/}	27.8
Canadian	557	545	2.2	517	442	17.0
Other	2,501	2,215	12.9	2,596	1,993	30.3
Products, total	1,714	1,881	(8.9)	1,874	1,784	5.0
Residual fuel oil	559	496	12.7	591	566	4.4
Other	1,155	1,385	(16.6)	1,283	1,218	5.3
Total imports	4,772	4,641	2.8	4,987	4,219	18.2
Total supply	16,080	15,707	2.4	16,747	15,400	8.7
Stock change, all oils	-1,314	- 309	XXXX	- 516	-1,187	XXXX
Refinery Operations						
Input to crude oil distillation units	11,871	11,505	3.2	12,217	11,527	6.0
Operable capacity	15,674	15,636	0.2	15,678	15,548	0.8
Refinery utilization (%) ⁸	75.7%	73.6%	2.9	77.9%	74.1%	5.1
Crude oil runs	11,649	11,404	2.1	12,019	11,418	5.3
Stocks (millions bbls.)	1986			1985 ²	% Change from	
	Mar. 31	Feb. 28		Mar. 31	Previous Month	Year Ago
Crude oil ^{10/}	339.9	333.7		329.1	1.9	3.3
Unfinished oils	102.6	101.9		110.2	0.7	(6.9)
Total motor gasoline**	220.4	244.0		220.1	(9.7)	0.1
Finished leaded motor gasoline*	72.2	80.8		81.3	(10.6)	(11.2)
Finished unleaded motor gasoline*	113.3	125.2		105.1	(9.5)	7.8
Naphtha-jet	6.0	6.8		6.9	(11.8)	(13.0)
Kerosine-jet	40.4	36.3		37.2	11.3	8.6
Distillate fuel oil	95.7	113.8		99.4	(15.9)	(3.7)
Residual fuel oil	39.2	41.9 ^{R/}		46.3	(6.4)	(15.3)
All other oils	132.6	139.1 ^{R/}		148.5	(4.7)	(10.7)
Total all oils	976.8	1,017.5 ^{R/}		997.7	(4.0)	(2.1)

1/ Based on API estimated data converted to a monthly basis.

2/ Source: U.S. Department of Energy.

3/ Source: January, U.S. Department of Energy, February-March, API.

4/ Includes crude losses.

5/ Beginning with January 1981, U.S. Department of Energy began using a new data collection system which encompasses a method to ascertain the amount of product reclassified during the production phase. So that there will be no double counting of these volumes, they are subtracted from total domestic products supplied.

6/ Includes lease condensate.

7/ Includes unaccounted for crude oil, refinery input of other hydrocarbons, and processing gain.

8/ Represents "Input to crude oil distillation units" as a percent of "Operable capacity."

9/ Derived by interpolating API weekly stocks data.

10/ Data do not include oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR.

R/ Revised.

* Included in motor gasoline.

** Includes finished leaded, finished unleaded, and motor gasoline blending components stocks.

4